

ABSTRACT OF THE DISCLOSURE

Systems, methods and devices for performing pulmonary procedures, and in particular treating lung disease. A flow control element includes a valve that prevents airflow in the inhalation direction but permits airflow in the exhalation direction. The flow control element is guided to and positioned at the site by a bronchoscope that is introduced into the patient's trachea and used to view the lungs during delivery of the flow control element. The valve may include one, two or more valve elements, and it may be collapsible for easier delivery. A source of vacuum or suction may be used to increase the amount of fluid withdrawn from the lung tissue. A device for measuring hollow structures, such as bronchioles, and a device for removing a previously-placed flow control element are disclosed as well.